Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHANNES H. SCHUURMAN, PODUTOORI R. REDDY,
BART BARMENTLO and FREEK RECKWEG

Appeal No. 1998-0787
Application No. 08/491,769

ON BRIEF

Before KIMLIN, JOHN D. SMITH and PAK, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claim 14. Claims 2-10 and 12, the other claims remaining in the present application, have been allowed by the examiner. Appealed claim 14 reads as follows:

14. A fat continuous spread having from about 30 to about 80% fat and having a trans fatty acid level of less than about 10%, prepared by a process in a production line to shorten residence time and increase a crystallization rate, the process comprising the steps of:

(1) selecting a structuring amount of a hardstock fat to make a spread product, the hardstock fat having a level of trans fatty acids not exceeding 10% and prepared by randomly interesterifying a mixture containing 30-75 wt.% of an oil (i) in which at least 20% of the fatty acids residues consists of linoleic acid and 25-70 wt.% of a fat (ii) in which at least 80% of the fatty acid residues is saturated and has a chain link of at least 16 carbons and then fractionating the interesterified mixture to obtain an olein fraction having a solid fat content of:

N_{10} = 22-80, N_{20} = 8-60, N_{30} = 1-25, N_{35} = 0-15;

(2) selecting an amount of an oil which is liquid at room temperature selected from the group consisting of soybean oil, sunflower oil, fish oil, rapeseed oil, coconut oil and mixtures thereof;

(3) combining the hardstock fat of step (1) and the liquid oil of step (2) to form a fat phase;

(4) preparing an aqueous phase to combine with the fat phase of step (3) to provide a fat continuous emulsion having less than 80% fat in the total composition;

(5) introducing the fat continuous emulsion into a scraped surface heat exchanger unit to cool the emulsion to an exit temperature of less than the temperature needed to transform a substantial amount of the fat crystals into an alpha phase to form a partially crystallized cooled emulsion;

(6) passing the partially crystallized cooled emulsion into a crystallizing unit for a shortened residence time sufficient to substantially convent the alpha

phase crystals into beta prime crystals in the cooled emulsion;

(7) passing the beta prime containing cooled emulsion into a second scraped surface heat exchange unit to cool the emulsion;

(8) recirculating the beta prime containing cooled emulsion from step (7) into the partially crystallized emulsion of step (5) as the partially cooled crystallized emulsion exits the scraped surface heat exchanger unit and passes int [sic, into] the crystallizing unit of step (6) to introduce crystal seeds into the partially crystallized emulsion;

wherein the throughput of the emulsion throughout the entire production line is x kilograms per hour, the shortened residence time of the emulsion in the crystallizing unit (C-unit) is y minutes and the recirculation flow rate of the emulsion recirculated into the cooled partially crystallized emulsion of step (8) is 0.2 x to 10 x; and

(9) packing the fat continuous spread to form a fat continuous product having less than 80% fat, less than 10% trans fatty acid, less than 5% free water and the product is not brittle due to post storage crystallization.

The examiner relies upon the following references as evidence of obviousness:

Havenstein, deceased et al. (Havenstein)	5,374,445	Dec. 20, 1994 (filed Nov. 19, 1992)
Wheeler et al. (Wheeler)	5,407,6795	Apr. 18, 1995 (Mar. 13, 1992)

Frank D. Gunstone et al. (Gunstone), Lipids in Foods Chemistry, Biochemistry and Technology 147-55 (Pergamon Press, New York 1983)

The allowed claims in the present application are directed to a process for preparing a fat continuous spread which shortens residence time and increases crystallization rate wherein the beta prime crystals are recirculated into the partially crystallized cool emulsion which is in the alpha phase. Claim 14 on appeal is directed to the fat continuous spread produced by the process defined by allowed claim 12. According to appellants, the claimed spread has good spreading and organoleptic characteristics and "contains a relatively high proportion of unsaturated fatty acids, but a relatively low proportion of trans fatty acid" (page 7 of Brief).

Appealed claim 14 stands rejected under 35 U.S.C. § 103 as being unpatentable over Wheeler in view of Havenstein and Gunstone.

We have thoroughly reviewed each of appellants' arguments for patentability, as well as the specification data relied upon in support thereof. However, we find that the examiner's rejection is free of reversible error.

Based on appellants' specification and the arguments presented in appellants' Brief, the principal distinction

between the recited process for making a fat continuous spread and the prior art method of preparing such spread is that appellants' method employs recirculation of the beta prime crystals back into the partially crystallized alpha phase whereas the prior art method does not utilize such a recirculating step.

Since appealed claim 14 is drafted in product-by-process format, certain principles of patent jurisprudence apply. It is well settled that the determination of patentability for a product-by-process claim is based upon the product itself, i.e., the patentability of the claimed product does not depend on its method of production. In re Thorpe, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985); In re Brown, 459 F.2d 531, 535,
173 USPQ 685, 688 (CCPA 1972); In re Pilkington, 411 F.2d 1345,

1348, 162 USPQ 145, 147 (CCPA 1969). Since we agree with the examiner that the use of "recirculation as a means of reprocessing is seen to be an obvious means of reducing the amount of equipment required in the spread making process" (sentence bridging pages 5 and 6 of Answer), without changing the basic nature of the product, and the Patent and Trademark Office is not equipped to make physical comparisons between products made by claimed and prior art processes, we find it reasonable to place on the present appellants the burden of demonstrating that the fat continuous spread made by the recited process is patentably distinct from the fat continuous spread of the prior art processes.

Appellants contend at page 12 of the Brief that "[t]he recirculation step of the specific cooled emulsion into the partially crystallized emulsion is critical to form products which are consumer acceptable," and that Example 1 of the instant specification demonstrates that the recirculation step produces a smooth spread which exhibits good mouthfeel and melting characteristics whereas the fat spreads prepared

without a recirculation step exhibited brittle characteristics and poor mouthfeel and spreadability.[1]

While appellants have provided comparative data indicating that an improved product is prepared with a recirculation step, we find that the limited data is hardly commensurate in scope with the degree of protection sought by the appealed claims.

In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 778 (Fed. Cir. 1983); In re Clemens, 622 F.2d 1029, 1035, 206 USPQ 289, 296 (CCPA 1980). In particular, although specification Example 1 is limited to a formula of 68% fat comprising 46.8% soybean oil and 20.2 wt.% interesterified hardstock-dry fractionated interesterified mixture of fully hardened soybean oil and liquid oil, 0.1 wt.% saturated distilled monoglyceride and 0.22 wt.% lecithin, the fat continuous spreads within the scope of claim 14 may have from about 30 to about 80% fat based upon a hardstock fat prepared by randomly interesterifying a mixture containing 30.75 wt.% of an oil in

[1] Appellants' statement at page 12 of the Brief that "Sample 4, processed without the recirculation step, produced a brittle product with more mouth feel and spreadability" is an apparent misstatement with respect to the more mouthfeel and spreadability.

which at least 20% of the fatty acid residues consists of linoleic acid and 25-70 wt.% of a fat in which at least 80% of the fatty acid residues is saturated. In addition, the oil can be any one of soybean oil, sunflower oil, fish oil, rapeseed oil, coconut oil and mixtures thereof in any relative proportion. Consequently, based on the extensive breadth of claim 14, we are not satisfied that appellants' Example 1 establishes that the myriad of fat continuous spreads encompassed by claim 14 are patentably distinct from the fat continuous spreads of the prior art. Appellants have not shouldered their burden of establishing that the specification results may be reasonably extrapolated to the large class of fat continuous spreads embraced by appealed claim 14. In re Kollman, 595 F.2d 48, 55, 201 USPQ 193, 198 (CCPA 1979).

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN Administrative Patent Judge	)
JOHN D. SMITH Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
CHUNG K. PAK Administrative Patent Judge	)

ECK:clm

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